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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/722,621	11/28/2000	Ken Kumakura	122.1424	5939

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EXAMINER

LIANG, REGINA

ART UNIT	PAPER NUMBER
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2629

MAIL DATE	DELIVERY MODE
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06/25/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/722,621

Applicant(s)

KUMAKURA ET AL.

Examiner

Regina Liang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19,22-34,37,38,40-49 and 51-54 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19,22-34,37,38,40-49 and 51-54 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is response to amendment filed 3/29/07. claims 1-19, 22-34, 37, 38, 40-49, 51-54 are pending in the application.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

3. Claims 26-34, 37-38, 40-49, 51-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagakubo (US Patent No. 5,757,343) in view of Mizushima (US Patent No. 4,193,095).

As to claims 26, 40, 51, 52, Nagakubo discloses a plasma display apparatus for displaying a color image, comprising: a controller (20, Fig. 4) controlling a number of emission of intensity thereof for each of input primary color video signals respectively to display a color image; a detection portion detecting a luminance level of the input primary color video signals (e.g. detecting the luminance mode 1 to mode 4 as shown in Fig. 2); adjusting amplitudes (or setting an amplitude ratio) of the input primary color video signals in accordance with the detected number of emissions or the detected intensity of the emissions (see Figs. 6 and 7).

It is noted that Nagakubo does not specifically disclose that the gain adjusting circuit including a white balance adjusting section. Mizushima is cited to teach a plasma device similar to Nagakubo. Mizushima further discloses the control circuit a white balance adjusting portion correcting white balance by adjusting amplitudes of each of the input primary color video signals (see col. 1, lines 26-32). It would have been obvious to one of ordinary skill in the art to have

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modified Nagakubo's gain adjusting circuit with the features of the white balance adjusting circuit as taught by Mizushima so as to provide a white balance image (col. 1, line 28).

As to claims 31, 41, Nagakubo discloses the detection portion detects the intensity from a display ratio of an image produced by the primary color video signals (see Fig. 2).

As to claim 42, Nagakubo discloses a control portion (Fig. 6) controlling the intensity from a display ratio of an image produced by the primary color video signals.

As to claims 27, 29, Nagakubo as modified discloses the white balance correction portion and a computing unit (5, Fig. 1) and a plurality of multipliers (see Fig. 6 of Nagakubo).

As to claims 28, 30, 37, Nagakubo discloses a storage unit (3, Fig. 4).

As to claims 32, 43, 44, Nagakubo discloses detecting the display current (e.g. total number of times of light emission, see Fig. 2).

As to claims 33, 45, 46, Nagakubo discloses detection portion detects the intensity from an external applied luminance adjusting input ((22, Fig. 4).

As to claims 34, 47, 48, Nagakubo discloses output gray levels (R', G', B', Fig. 1) of images represented by the primary color video signals are adjusted in accordance with input gray levels (R, G, B, Fig. 6) of the image represented by the primary color video signals, thereby correcting the color balance which varies the intensity of the primary color video signals, wherein the display comprises: a first detection portion detecting the input gray levels of the image represented by the primary color video signals (e.g. detecting the luminance mode 1 to mode 4 as shown in Fig. 2).

It is noted that Nagakubo does not specifically disclose that the gain adjusting circuit including a white balance adjusting section. Mizushima is cited to teach a plasma device similar

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to Nagakubo. Mizushima further discloses the control circuit a white balance adjusting portion correcting white balance by adjusting amplitudes of each of the input primary color video signals (see col. 1, lines 26-32). It would have been obvious to one of ordinary skill in the art to have modified Nagakubo's gain adjusting circuit with the features of the white balance adjusting circuit as taught by Mizushima so as to provide a white balance image (col. 1, line 28).

As to claims 38, 49, Nagakubo discloses a second detection portion detecting a display ratio (e.g. different modes I-IV) with different ratios).

As to claims 53, 54, Nagakubo further discloses that the amplitude ratio between the primary color video signals is set in accordance with the intensity of the primary color video signals (Figs. 6 and 7).

3. Claims 1-19, 22-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagakubo and Mizushima as applied to claims 26, 34, 40, 47, 51, 53, 54 above, further in view of Lee et al (US 5,526,059 hereinafter Lee).

As to claims 1 and 19, Nagakubo as modified by Mizushima does not disclose the white balance correction unit maintaining a constant white balance regardless of the intensity of each input primary color video signal. However, Lee teaches a display device having a white balance correction circuit for maintaining a constant white balance irrespective of the signal level of input signals (see the abstract and col. 4, lines 28-36). Thus, it would have been obvious to one of ordinary skill in the art to modify the device of Nagakubo as modified by Mizushima to have the feature as taught by Lee "thereby reproduce excellent original colors on the screen" (col. 4, lines 35-36 of Lee).

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As to claim 2, Nagakubo discloses the detection portion detects the intensity from a display ratio of an image produced by the primary color video signal (see Fig. 2).

As to claims 3, 8, Nagakubo discloses a control portion (Fig. 6) controlling the intensity from a display ratio of an image produced by the primary color video signals.

As to claims 4, 9, 14, 15, Nagakubo as modified discloses the white balance correction portion and a computing unit (5, Fig. 1) and a plurality of multipliers (see Fig. 6 of Nagakubo).

As to claims 5, 6, 10, 11, 16, 22, Nagakubo discloses a storage unit (3, Fig. 4).

As to claim 7, Nagakubo discloses detecting the display current (e.g., total number of times of light emission, see Fig. 2).

As to claims 12, 13, Nagakubo discloses detection portion detects the intensity from an external applied luminance adjusting input (22, Fig. 4).

As to claims 17, 24, Nagakubo teaches the emission due to the primary color signals are produced from phosphors (plasma display) of three primary color (R, G, B).

As to claims 18 and 25, Nagakubo discloses the display is a plasma display.

As to claim 23, Nagakubo discloses a second detection portion detecting a display ratio (e.g., different modes I-IV with different ratios).

Response to Arguments

4. Applicant's arguments with respect to claims 1-19, 22-34, 37, 38, 40-49, 51-54 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's remarks regarding Nagakubo and Mizushima on pages 13-15 are not persuasive since applicant is reading limitation into the claims. Claims 26, 40, 51, 53 and 54

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does not require “a white balance correction unit maintaining a constant white balance regardless of the number of emissions or intensity of each input primary color video signal by adjusting respective amplitudes of each input primary color video signal for each displayed color image in accordance with said detected luminance level for each displayed color image”.

Claims 26, 40, 51, 53 and 54 **only** require “a correction circuit correcting white balance by adjusting amplitudes (or setting an amplitude ratio) of said input primary color video signals of the displayed color image in accordance with said detected luminance level”. Nagakubo teaches the plasma display device having an adjusting circuit for adjusting amplitudes of the input primary color video signals in accordance with the detected number of emissions or the detected intensity of the emissions (see Figs. 6 and 7), and Mizushima teaches a “color display requires the control of the respective luminance of red, green and blue luminescent elements for providing a **white balance** of display image” and one of conventional method to provide a white balance of display image is by “obtaining a desired luminance level comprise controlling the amplitude of voltage or current applied to a luminescent element” (col. 1, lines 26-32). Thus, the combination of Nagakubo and Mizushima teaches “a correction circuit correcting white balance by adjusting amplitudes of said input primary color video signals of the displayed color image in accordance with said detected luminance level” as claimed.

The newly amended claims 1 and 19 require “a white balance correction unit **maintaining a constant white balance regardless of the number of emissions or intensity of each input primary color video signal by adjusting respective amplitudes of each input primary color video signal for each displayed color image in accordance with said detected**

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luminance level for each displayed color image". Lee is cited to teach these features, note the rejection above. Thus, the combination of Nagakubo, Mizushima and Lee teaches the limitation as claimed in claims 1 and 19.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

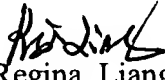
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Regina Liang whose telephone number is (571) 272-7693. The examiner can normally be reached on Monday-Friday from 8AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe, can be reached on (571) 272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Regina Liang
Primary Examiner
Art Unit 2674

6/19/07